

## CLAIMS

I claim:

- 1        1. An optical mouse integrated circuit comprising:  
2        an unitary substrate;  
3        an optical sensor generating data;  
4        an analog-to-digital converter receiving and processing the data;  
5        a microprocessor receiving the processed data; and  
6        memory connected to the microprocessor;  
7        wherein the optical sensor, analog-to-digital converter, microprocessor, and  
8        memory are formed on the unitary substrate.
- 1        2. An optical mouse integrated circuit, as defined in claim 1, further comprising a  
2        digital signal processor interposing the analog-to-digital converter and the  
3        microprocessor.
- 1        3. An optical mouse integrated circuit, as defined in claim 2, the digital signal  
2        processor further including a hardware controller.
- 1        4. An optical mouse integrated circuit, as defined in claim 1, further comprising a  
2        hardware controller interposing the analog-to-digital converter and the microprocessor.
- 1        5. An optical mouse integrated circuit, as defined in claim 1, the microprocessor  
2        further including an input/output controller.
- 1        6. An optical mouse integrated circuit, as defined in claim 5, further comprising a  
2        digital signal processor interposing the analog-to-digital converter and the  
3        microprocessor.
- 1        7. An optical mouse integrated circuit, as defined in claim 6, the digital signal  
2        processor further including a hardware controller.

- 1           8. An optical mouse integrated circuit, as defined in claim 1, wherein the memory  
2    is programmable memory.